Amendments

A list of pending claims:

1 (currently amended). A composition for use as a standardized measure of apoptosis in a test tissue sample ~~of tissue~~ from a subject, the composition comprising at least one segment of ~~an equivalent~~ a naturally occurring tissue that has been subjected to a treatment that reproducibly results in a predetermined, measurable amount of apoptosis in the segment.

2 (currently amended). The composition of claim 1, wherein the naturally occurring tissue is selected from the group consisting of skin, brain, heart, lung, liver, spleen, pancreas, thymus, thyroid, lymph, tonsil, stomach, kidney, bladder, intestine, testis, colon, mammary, ovary, uterus, muscle and bone.

3 (original). The composition of claim 1, wherein the amount of apoptosis in the segment is measured as a predetermined amount of DNA damage in a TUNEL assay.

4 (original). The composition of claim 1, wherein the amount of apoptosis in the segment is measured as a predetermined increase in amount of a biological molecule known to be increased in apoptotic cells.

5 (original). The composition of claim 4, wherein the biological molecule is selected from the group consisting of mRNA and protein.

6 (original). The composition of claim 5, wherein the biological molecule is a protein, or an mRNA encoding a protein selected from the group consisting of caspases, annexin, DNAse I, DNAse II, NUC 18/cyclophilin, transglutaminase Fas, FasL, p53, Diva, Bak, Bcl-X_S, Bik, Bim, Bad, Bid, Egl-21, Myc and Bax.

7 (original). The composition of claim 1, wherein the amount of apoptosis in the segment is measured as a predetermined decrease in amount of a biological molecule known to be decreased in apoptotic cells.

8 (original). The composition of claim 7, wherein the biological molecule is selected from the group consisting of mRNA and protein.

9 (original). The composition of claim 8, wherein the biological molecule is a protein, or an mRNA encoding a protein selected from the group consisting of $Bc1_2$, Bcl-X_L, Mcl-1 and CED-9.

10 (currently amended). The composition of claim 1, wherein the treatment comprises culturing the ~~tissue~~ segment in a microgravity bioreactor for a period of time known to produce the predetermined amount of apoptosis in the ~~tissue~~ segment.

11 (currently amended). The composition of claim 10, wherein the treatment ~~further~~ comprises culturing the ~~tissue~~ segment in a medium comprising dexamethasone.

12 (currently amended). The composition of claim 1, wherein the treatment comprises subjecting the ~~tissue~~ segment to a biological stress known to produce the predetermined amount of apoptosis in the ~~tissue~~ segment.

13 (currently amended). The composition of claim 12, wherein the biological stress comprises scalding the ~~tissue~~ segment.

14 (cancelled)

15 (currently amended). The composition of claim 1, <u>further</u> comprising at least ~~two tissue segments, wherein one of the segments is~~ a negative control segment <u>of a tissue</u> which has not been subjected to the treatment and ~~another of the segments is~~ <u>at least</u> a positive control segment <u>of the tissue</u> which has been subjected to a level of the treatment that reproducibly results in a maximum amount of apoptosis obtainable in the segment as a result of the treatment.

16 (currently amended). The composition of claim 15, <u>further</u> comprising one or more intermediate control segments <u>of the tissue</u> which have been subjected to a level of the treatment that reproducibly results in a predetermined amount of apoptosis intermediate between that of the negative control segment and that of the positive control segment.

17 (currently amended). A kit for evaluating apoptosis in a test sample of tissue, the kit comprising a container containing at least one segment of

~~an equivalent~~ a naturally occurring tissue that has been subjected to a treatment that reproducibly results in a predetermined, measurable amount of apoptosis in the ~~tissue~~ segment, and instructions for use of the ~~tissue~~ segment in evaluating the apoptosis in the test sample of tissue.

18 (currently amended). The kit of claim 17, further comprising at least ~~two tissue segments, wherein one of the segments is~~ a negative control segment of a tissue which has not been subjected to the treatment and ~~another of the segments is~~ at least a positive control segment of the tissue which has been subjected to a level of the treatment that reproducibly results in a maximum amount of apoptosis obtainable in the segment as a result of the treatment.

19 (currently amended). The kit of claim 18, further comprising one or more intermediate control segments of the tissue which have been subjected to a level of the treatment that reproducibly results in a predetermined amount of apoptosis intermediate between that of the negative control segment and that of the positive control segment.

20 (currently amended). The kit of claim 17, wherein the ~~apoptotic tissue~~ segment is further processed ~~for~~ by histological analysis~~evaluation~~.

21 (currently amended). The kit of claim 17, wherein the ~~apoptotic tissue~~ segment is further processed ~~for~~ by TUNEL staining.

22 (currently amended). The kit of claim 17, wherein the ~~apoptotic tissue~~ segment is further processed ~~for~~ by immunohistochemical staining. ~~immunological evaluation.~~

23 (cancelled)

24 (cancelled)

25 (cancelled)

26 (new) The composition of claim 15 wherein the tissue is a naturally occurring tissue or a bioartificially constructed tissue.

27 (new) The composition of claim 26 wherein the bioartificially constructed tissue is a bioartificial living skin equivalent.

B1 Cont

28 (new) The kit of claim 18 wherein the tissue is a naturally occurring tissue or a bioartificially constructed tissue.

29 (new) The kit of claim 28 wherein the bioartificially constructed tissue is a bioartificial living skin equivalent.